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EXAMINER

ARNADE, ELIZABETH

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/598,312	<b>Applicant(s)</b> HAAG ET AL.	
	<b>Examiner</b> ELIZABETH ARNADE	<b>Art Unit</b> 4122	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/24/2006</u> . | 6) <input type="checkbox"/> Other: ____.  |

### **DETAILED ACTION**

1. Claims 1-25 are pending as amended on 11/13/2007.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “plurality of partial elements that are joined with the aid of a locking mechanism” in claim 20 and “the modules arranged between upright reinforcing elements of the concrete” in claim 13 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

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the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The limitation found in claim 1 and 2 wherein it states “wherein the lattices situated adjacent to this open side are inclined relative to the lattice situated opposite of this open side by an angle of approximately 90E to 120E” is not included in the specification. Additionally the limitation found in claim 17 wherein it states “wherein the lattices situated adjacent to this open side are inclined relative to the lattice situated opposite of this open side by an angle of approximately 90E to 135E, preferably 95E to 120E” is not included in the specification.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-25 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 2 and 17 recites the limitation "the lattices" in line 19, 15, and 7 respectively. There is insufficient antecedent basis for this limitation in the claim.

Additionally it is unclear in claims 1 and 2 what is meant by “wherein the lattices situated adjacent to this open side are inclined relative to the lattice situated opposite of this open side by an angle of approximately 90E to 120E”. It is unclear if “the lattices” are the same as “the lattice” which “is open toward one side” and how “the lattices” are adjacent to the open side and furthermore how are they inclined “relative to the lattice situated opposite of this open side”. It is also unclear if the “the lattice situated opposite” found in lines 19-20 and 15-16 in claims 1 and 2 respectively, is the same lattice previously mentioned in lines 18 and 14 respectively. This lack of clarity is repeated in claim 17 wherein it states “wherein the lattices situated adjacent to this open side are inclined relative to the lattice situated opposite of this open side by an angle of approximately 90E to 135E, preferably 95E to 120E”. The same lack of clarity and reasoning for rejection found in claims 1 and 2 is applied to claim 17.

Furthermore for claims 1, 2 and 17, it is unclear what is meant by the terms “90E to 120E” and “90E to 135E”.

As for claims 4, 5, 21, and 22, it is unclear what is meant by the term “the sides” and “on one side”. It is unclear exactly where or what part of the “open lattice constructions” the claim is being referred to when it states “the sides”. Also it is unclear if the limitation pertaining to “on one side” and “other side” is the same as “the sides” mentioned in claim 4. Additionally it is unclear what is meant by the limitation “offset relative to the other side by approximately half the width of a triangle”. No precise width measurement is claimed therefore “a triangle” could be any triangle containing any width desired therefore rendering the scope of the claim indefinite.

As for claim 12, it is unclear what "the reinforcing elements" are when referring back to claim 1. Claim 12 recites the limitation "the reinforcing elements". There is insufficient antecedent basis for this limitation in claim 1.

As for claim 13, it is unclear what is meant by "arranged between upright reinforcing elements of the concrete". It is unclear what "reinforcing elements are being referenced. It is unclear if these "reinforcing elements" are the same "reinforcing elements" as claimed in claim 2 or the "reinforcing mesh" of claim 1 or other non distinct reinforcing elements placed into the concrete or inherently part of the concrete. It is also unclear as to how these reinforcing elements are "upright".

As for claim 15, the independent claim is a product by process claim wherein the process claim is defined by claim 1 or 2. Since the process and structural elements contained within the process are unclear as described above in the rejections to claims 1 and 2, claim 15 is also rejected for being indefinite.

As for claim 16, it is unclear what is meant by "in accordance with one of claims 1-2". Claim 16 is written as an independent claim but is an improper independent claim because the phrase "in accordance with one of claims 1-2" does not further limit the claim. Advice to applicant is to follow US standard practice. See MPEP 608.01(i).

In order to provide a complete action, the examiner has further rejected claims 1-25 as best understood.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 17-19, 21-23, and 25 rejected under 35 U.S.C. 102(b) as being anticipated by WO 94/29541 (Breuning '541 hereinafter).

As for claim 17, Breuning '541 teaches a module (200, 300, 400, 500) for producing concrete elements, particularly semi-finished concrete products, or concrete slabs, comprising a plurality of adjacently arranged displacers, comprising plastic balls (240) or plastic shells (440), for being pressed into a semi-set concrete layer, wherein the plurality of adjacently arranged displacers (240, 340, 440, 540) is respectively arranged in a lattice (230, 330, 430, 530) of rods, characterized in that the lattice (230, 330, 430, 530) is open toward one side, wherein the lattices situated adjacent to this open side are inclined relative to the lattice situated opposite of this open side by an angle of approximately 90E to 135E, preferably 95E to 120E (pg 3, lines 19-23; pg 5, lines 3-9; Fig 1-8).

The examiner interprets the lattice open toward one side to be the lower mesh of the prior art wherein the side filigree beams read on "the lattices situated adjacent to this open side" which "are inclined relative to the lattice situated opposite of this open side" by a ninety degree/perpendicular angle. The examiner interprets "90E to 135E" to read as 90 degrees to 135 degrees. The examiner interprets "the lattice situated

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opposite of this open side” to be the upper mesh lattice disclosed in the prior art.

Therefore the prior art reads on the limitations of the claim in full.

As for claims 18-19, 21-23 and 25, Breuning '541 teaches that the module is characterized in that at least a part of the displacers (240) protrudes from the lattice (230); characterized in that the modules (200, 300, 400, 500) are produced from welded wire mesh sections that are cut to size, comprising wire mesh arrangements with definite dimensions, by respectively bending a lattice and caging the displacers (240, 340, 440) in the thusly bent lattice; characterized in that the modules (500) are produced from downwardly open lattice constructions that respectively feature an essentially triangular rod construction on the sides; characterized in that the lateral rod constructions on one side are offset relative to the other side by approximately half the width of a triangle; characterized in that the modules comprise shells; characterized in that the displacers are downwardly open (pg 3, lines 19-23; pg 5, lines 3-9; Fig 4-8).

The examiner interprets the "filigree beam welded to the lower mesh and the upper mesh" of Breuning '541 to read on the welded wire mesh sections in claim 19. The filigree beams which are bent into an essentially triangular rod construction located on the sides as seen in Fig 4, 5 and 8 of the prior art, are interpreted to read on the bent lattice of claim 19 and the side triangular rod construction of claim 21. The examiner interprets the lower mesh of Breuning '514 consisting of laterally spaced crossing bars/rods to read on claim 22 such that a bar/rod “on one side is offset relative to the other side” by the next crossing bar/rod by a width and this width is approximately half the width of a triangle. The examiner interprets the hollow plastic bodies of the prior art



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to read on claim 23 as the hollow plastic body is in itself a shell. The examiner interprets the displacers/hollow plastic bodies of the prior art to read on claim 25 as being open since they are positioned in the apparatus wherein there is open spaces in all directions of the hollow bodies and downward is relative depending on how the support itself is rotated such that the hollow bodies are always “downwardly open”.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 16 rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,055,252 (Zimmerman hereinafter).

For purposes of examination, the examiner has removed the phrase “in accordance with one of claims 1-2” for the reasons stated in 35 USC 112 rejection of claim 16 detailed above.

Zimmerman teaches a method for producing concrete elements, particularly concrete slabs, wherein a semi-finished concrete product is produced (Abstract).

Zimmerman does not expressly disclose that the concrete product produced is additionally processed, namely with the steps that at least one additional concrete layer is applied onto the semi-finished product, wherein an uppermost concrete layer then

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forms an upper side of the finished concrete element, preferably a finished concrete plate.

It would be obvious to one of ordinary skill in the art at the time the invention was made to add another layer of concrete onto a first layer. This would render a duplication of parts, that being a duplication of the first layer of concrete. It would only take ordinary skill to duplicate parts. See *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) and MPEP 2144.04(VI).

10. Claims 1-15 rejected under 35 U.S.C. 103(a) as being unpatentable over US Zimmerman in view of Breuning '541.

As for claim 1, Zimmerman teaches a method for producing concrete elements, particularly semi-finished concrete products, the method comprising: placing a reinforcing mesh into a formwork wherein the reinforcing mesh consists of conventional welded wire mesh; filling a first layer of concrete mass into a formwork and allowing the first layer to set, resulting in at least a semi-set first layer of concrete mass; allowing the mass to set and removing the resulting semi-finished product from the formwork (pg 3, lines 26-54).

As for claim 2, Zimmerman teaches a method for producing concrete elements, particularly semi-finished concrete products, comprising the steps: placing reinforcing elements comprising lattice-like reinforcing into a formwork, filling a layer of concrete mass into the formwork and allowing it to set to become a workable semi-set layer of concrete mass; allowing the layer of concrete mass to set

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and the resulting semi-finished product is removed from the formwork (pg 3, lines 26-54). The examiner interprets the reinforcing wire mesh and the reinforcing rods of Zimmerman to be the reinforcing elements.

As to claim 1, Zimmerman does not expressly disclose that the layer of concrete mass is applied to the formwork and allowed to set to form a semi-set first layer before placing the reinforcing mesh onto the semi-set first layer.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to fill a first layer of concrete mass into a formwork and allow the first layer to set before placing the reinforcing mesh onto the semi-set first layer. This would render a change in sequence such that the process steps are reversed. Selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results. See *In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946), *Ex parte Rubin*, 128 USPQ 440 (Bd. App. 1959) and MPEP 2144.04(IV).

As to claim 1, Zimmerman does not expressly disclose filling a second layer of concrete mass into the formwork on top of the first layer and the reinforcing mesh and allowing the second layer to set, resulting in at least a semi-set second layer of concrete mass; allowing the second concrete mass to set.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to fill a second layer of concrete mass into the formwork on top of the first layer and the reinforcing mesh and allowing the second layer to set, resulting in at least a semi-set second layer of concrete mass and allowing the second concrete mass to set. This would render a duplication of parts, that being a duplication of the first

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layer of concrete. It would only take ordinary skill to duplicate parts. See *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) and MPEP 2144.04(VI).

As to claim 1 and 2, Zimmerman does not expressly disclose pressing modules (200, 300, 400, 500) comprising a plurality of adjacently arranged displacers, the displacers comprising one of plastic balls (240) or plastic shells (440), into the semi-set second layer, wherein the plurality of adjacently arranged displacers (240, 440) is respectively arranged in a lattice (230, 330, 430, 530) of rods; wherein the lattice is open toward one side, the one side being downward, wherein the lattices situated adjacent to this open side are inclined relative to the lattice situated opposite of this open side by an angle of approximately 90E to 120E, and wherein the modules are produced by caging the displacers (120, 340, 440, 540) in the lattice.

Breuning '541 discloses a closely related invention of making concrete elements by filling concrete onto a module comprising a plurality of adjacently arranged the displacers comprising one of plastic balls (240) or plastic shells, wherein the plurality of adjacently arranged displacers (240, 340, 440, 540) is respectively arranged in a lattice (230, 330, 430, 530) of rods, wherein the lattice is open toward one side, the one side being downward, wherein the lattices situated adjacent to this open side are inclined relative to the lattice situated opposite of this open side by an angle of approximately 90E to 120E, and wherein the modules are produced by caging the displacers (240, 340, 440, 540) in the lattice (pg 3, lines 19-23; pg 5, lines 3-9; Fig 1-8). See claim 17 under USC 102 rejections for explanation of examiner's interpretations.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the module of Breuning '541 with the method of making concrete elements of Zimmerman. The rationale to combine the teachings of Zimmerman and Breuning '541 is the motivation provided by Breuning '541 that the module comprising the displacers caged in the lattice allows for a more accurate, stable concrete product, savings in reinforcement work and large savings in time and materials (Abstract; pg 2, lines 19-21; pg 3, lines 2-3).

As for claims 3-5, Breuning '541 teaches that the modules (200, 300, 400) are produced from welded wire mesh sections that are cut to size, namely by respectively bending a lattice (230, 330, 430, 530); characterized in that the modules are produced from downwardly open lattice constructions that respectively feature an essentially triangular construction on the sides; characterized in that the lateral rod constructions on one side are offset relative to the other side by approximately half the width of a triangle (pg 3, lines 19-23; pg 5, lines 3-9; Fig 4-8). See claims 19, 21, and 22 under 35 USC 102 rejections for explanation of examiner's interpretations.

As for claims 6-7, 9, and 10, Breuning '541 further teaches that the modules comprise plastic parts; that the of modules comprise shells; are characterized in that the displacers are downwardly open; are characterized in that part of the displacers (240) upwardly protrudes from the lattice (pg 3, lines 19-23; pg 5, lines 3-9; Fig 4-8). See claims 23 and 25 under 35 USC 102 rejections for explanation of examiner's interpretation. Examiner interprets that the hollow plastic bodies of Breuning '541 which

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are placed on top of the lower mesh to be upwardly protruding from the lower mesh/lattice (Fig. 8) and therefore read on claim 10.

As for claim 8, Breuning '541 does not expressly disclose that the displacers have at least one of a flat upper side and/or lower side.

It would be obvious to one of ordinary skill in the art at the time the invention was made to flatten the displacers such that it has a flattened upper or lower side; thus rendering a change in shape. A change in shape would only require ordinary skill. See MPEP 2144.04 (IV) and In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966)

As for claim 14, Breuning '541 teaches that a space remaining between the displacers (240) and lower reinforcing meshes is filled with concrete mass (Fig. 8; pg 3, lines 5-10).

As for claims 11-13, Zimmerman teaches that the reinforcing elements are interconnected in order to be fixed and that they are upright reinforcing elements of the concrete (Fig. 1; pg 3, lines 14-38 and 47-51). The examiner interprets the reinforcing wire mesh and the reinforcing rods of Zimmerman to be the reinforcing elements. Also Zimmerman and Breuning' 541 combine to teach that the modules are arranged between upright reinforcing elements as detailed in claim 2. When the module of Breuning '541 is pressed into the concrete layer of Zimmerman, it would be arranged in the assembly jig of Zimmerman such that the module would be between the upright wire mesh and reinforcing rods.

Neither Zimmerman nor Breuning '541 expressly disclose that several modules (200, 300, 400, 500) are pressed into the semi-set concrete mass parallel to one another.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to press several modules (200, 300, 400, 500) into the semi-set concrete mass parallel to one another. The motivation to do so is that one may want a larger or multilayer concrete mass to be formed in either greater width or height wherein the modules could be placed parallel in a side by side formation or stacked parallel on top of another.

As for claim 15, Zimmerman and Breuning '541 combine to teach a semi-finished concrete product as detailed above in claims 1 and 2.

11. Claim 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Breuning '541 as applied to claim 17 above, in view of US Patent 5,396,747 (Breuning '747 hereinafter).

Breuning '541 teaches a module as detailed above in claim 17.

Breuning '541 does not expressly disclose that each displacer comprises a plurality of partial elements that are joined with the aid of a locking mechanism.

Breuning '747 discloses a closely related invention of a module comprising hollow plastic bodies arranged in a lattice (pg 2, lines 9-22) wherein each displacer/hollow body comprises a plurality of partial elements that are joined with the aid of a locking mechanism (Fig. 3-5; pg 2, line 76 to pg 3 line 2).

It would be obvious to one of ordinary skill in the art to include the plurality of partial elements and the locking mechanism of Breuning '747 with the module taught by Breuning '541. The rationale to combine the teachings of Breuning '747 and Breuning '541 is the motivation provided by Breuning '747 that the hollow bodies may come in different sizes/shapes to allow for variation and therefore it would practical to arrange the different variations in parts (pg 2, lines 36-42).

12. Claim 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Breuning '541 as applied to claim 17 above.

Breuning '541 teaches a module as detailed above in claim 17.

Breuning '541 does not expressly disclose that the displacers have a flat or flattened upper side/or lower side.

It would be obvious to one of ordinary skill in the art at the time the invention was made to flatten the displacers such that it has a flattened upper or lower side; thus rendering a change in shape. A change in shape would only require ordinary skill. See MPEP 2144.04 (IV) and In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966)

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US patent 4,702,048 (Millman) teaches a method of making concrete wherein concrete volume is reduced by placing void spaces into the concrete wherein these void spaces are created through the use of embedding a semi sphere



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containing thermoplastic material into the concrete wherein a wire reinforcement mesh may be placed adjacent the thermoplastic material. US Patent 3,213,581 (Macchi) teaches a method for making concrete elements wherein a lattice of reinforcing bars/steel rods are placed onto a formwork wherein hollow tubes are further caged into the lattice of bars/steel rods wherein concrete is poured onto the formwork and allowed to set.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELIZABETH ARNADE whose telephone number is (571)270-7664. The examiner can normally be reached on M-F, 9:00-5:00 p.m. EST except alternate F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/E. A./  
Examiner, Art Unit 4122

/Timothy J. Kugel/  
Primary Examiner, Art Unit 1796